AIR QUALITY PERMIT

Issued to: EnCana Gathering Services (USA), Inc.
Battle Creek Compressor Station
600 South Excelsior
Butte, MT 59740

Permit: #3025-08
Administrative Amendment (AA) Received: 4/30/03 and 6/5/03
Department Decision on AA: 07/16/03
Permit Final: 08/01/03
AFS # 005-0009

An air quality permit, with conditions, is hereby granted to EnCana Gathering Services (USA), Inc. (EnCana), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

EnCana owns and operates a natural gas compressor station and associated equipment located in the SW¼ of the SE¼ of Section 26, Township 36 North, Range 19 East, in Blaine County, Montana. This facility is located on a 480-acre site approximately 20 miles northeast of Chinook and is known as the Battle Creek Compressor Station. A list of permitted equipment is contained in Section I.A. of the permit analysis.

B. Current Permit Action

On April 30, 2003, the Department of Environmental Quality (Department) received a letter from Aspen Consulting & Engineering, Inc., on behalf of EnCana requesting an administrative amendment to Permit #3025-07. Specifically EnCana requested the Department to:

- Remove Section II.C.5. of the permit requiring EnCana to annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b)
- Remove the language in Section II.A.1. of the permit that limits EnCana to the operation of not more than four natural compressor engines at any given time
- Remove the language in Section II.A.7. of the permit that limits EnCana to the operation of Unit #04 to 500 hours per year
- Remove the following sources from the Montana Air Quality Permit #3025-07:
  - ALCO Dehydrator Reboiler (Unit #8a)
  - ALCO Dehydrator Still Vent (Unit #8b)
  - Cat 306-hp diesel generator (Unit #11)

On June 5, 2003, the Department received a letter from Aspen Consulting & Engineering, Inc., on behalf of EnCana requesting an administrative amendment to Permit #3025-07 to change the name on the permit from EnCana Energy Resources, Inc. to EnCana.

In the current permitting action, the Department determined that Section II.C.5. will remain in the permit because the potential to emit from the source is above 100 tons per year without the imposition of the voluntary emission limits. The Department determined that the language in Section II.A.1. will remain in the permit because it is this language that makes emissions reductions obtained through offsetting a federally enforceable permit condition, which allows EnCana flexibility under ARM 17.8.745. The Department determined that the language in Section II.A.7. will be removed from the permit because the change will not increase the facility's potential to emit over 100 tons for any single pollutant. Units #8a, #8b, and #11 will be removed from the permit because they have been physically removed from the facility. The current permitting action also changes the name on the permit from EnCana Energy Resources, Inc. to EnCana. The permit has been updated to reflect current permit language and rule references used by the Department.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. EnCana shall not operate more than four natural gas compressor engines at any given time. The compressor engines may be lean burn engines, or rich burn engines retrofitted with Non-Selective Catalytic Reduction (NSCR) units and Air/Fuel Ratio (AFR) controllers. The emission limits for each of the engines shall be determined as follows (ARM 17.8.749):

   Emission Limit (pounds per hour (lb/hr)) = Emission Factor (grams per break horsepower-hour (g/bhp-hr)) * maximum rated capacity of engine (bhp) * 0.002205 pounds per gram (lb/g)

2. Unit #01 shall not have a designed horsepower rating greater than 800-hp. The emission limit for Unit #01 shall be determined by using the equation in Section II.A.1. in conjunction with the following emission factors (ARM 17.8.749):

   NO_x[1] 5.90 g/bhp-hr
   CO 2.64 g/bhp-hr
   VOC 1.00 g/bhp-hr

3. Unit #02 shall not have a designed horsepower rating greater than 800-hp. The emission limit for Unit #02 shall be determined by using the equation in Section II.A.1. in conjunction with the following emission factors (ARM 17.8.749):

   NO_x[1] 2.00 g/bhp-hr
   CO 2.64 g/bhp-hr
   VOC 1.00 g/bhp-hr

4. Unit #07 shall not have a designed horsepower rating greater than 1,600-hp. The emission limit for Unit #07 shall be determined by using the equation in Section II.A.1. in conjunction with the following emission factors (ARM 17.8.749):

   NO_x[1] 1.30 g/bhp-hr
   CO 2.24 g/bhp-hr
   VOC 1.00 g/bhp-hr

[1] NO_x reported as NO_2.

5. Unit #09 shall not have a designed horsepower rating greater than 1,150-hp. The emission limit for Unit #09 shall be determined by using the equation in Section II.A.1. in conjunction with the following emission factors (ARM 17.8.749):

NO_x[1]	1.50 g/bhp-hr
CO	1.98 g/bhp-hr
VOC	0.58 g/bhp-hr

6. EnCana shall not operate more than one emergency generator at any given time (ARM 17.8.749).

7. Unit #04 shall not have a designed horsepower rating greater than 48-hp. In addition, Unit #04 shall only be used as backup or in emergency situations (ARM 17.8.749).

8. The operating hours for Unit #11 shall not exceed 720 hours during any rolling 12-month time period (ARM 17.8.749).

9. EnCana shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

10. EnCana shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

11. EnCana shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.10. (ARM 17.8.749).

B. Testing Requirements

1. EnCana shall test Unit #01 and Unit #02 for nitrogen oxides (NO_X) and carbon monoxide (CO), concurrently, to demonstrate compliance with the NO_X and CO emission limits contained in Sections II.A.2. and II.A.3. Testing shall continue on an every 2-year basis or according to another testing/monitoring schedule as may be approved by the Department. As of the date of this permit, both Unit #01 and Unit #02 were last tested in May 2002 (ARM 17.8.105 and ARM 17.8.749).

2. EnCana shall test Unit #07 for NO_x and CO, concurrently, to demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.4. Testing shall continue on an every 2-year basis or according to another testing/monitoring schedule as may be approved by the Department. As of the date of this permit, Unit #07 was last tested in May 2002 (ARM 17.8.105 and ARM 17.8.749).

3. EnCana shall test Unit #09 for NO_x and CO, concurrently, to demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.5. Testing shall continue on an every 2-year basis or according to another testing/monitoring schedule as may be approved by the Department. As of the date of this permit, Unit #09 was last tested in May 2002 (ARM 17.8.105 and

17.8.749).

4. During the test on each compressor engine, EnCana shall monitor and record the following: intake manifold temperature and pressure, exhaust manifold temperature and pressure, engine revolution per minute (rpm), and all parameters necessary to calculate horsepower. This information shall be submitted to the Department along with the Source Test Report (ARM 17.8.105).

5. All compliance source tests shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

6. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. EnCana shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in Section I.A. of the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date specified in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505). EnCana shall submit the following information annually to the Department by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

   a. Hours of operation of the emergency generator.

   b. Summary report listing the reasons why the emergency generator was operated.

2. All records compiled in accordance with this permit must be maintained by EnCana as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

3. EnCana shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745(1)(d) that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit.

   The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change. This notice must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

4. EnCana shall document, by month, the hours of operation of Unit #11. By the 25th day of each month, EnCana shall total the hours of operation of Unit #11 during the previous 12 months to verify compliance with the limitation in Section

II.A.8. A written report of the compliance verification shall be submitted to the Department along with the annual inventory (ARM 17.8.749).

5. EnCana shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required in ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207, and shall be submitted with the annual emission inventory information.

SECTION III: General Conditions

A. Inspection - EnCana shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if EnCana fails to appeal as indicated below.

C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving EnCana of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*. (ARM 17.8.756).

D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties and/or other enforcement as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals - Any person or persons, jointly or severally, adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The Department's decision on the application is not final unless 15 days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board.

F. Permit Inspection - As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.

G. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by EnCana may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

PERMIT ANALYSIS
EnCana Gathering Services (USA), Inc.
Battle Creek Compressor Station
Permit #3025-08

I. Introduction/Process Description

A. Permitted Description

EnCana Gathering Services (USA), Inc. (EnCana) operates a natural gas compression station consisting of the following equipment:

Unit #01: 1978 Superior 8G-825 800-horsepower (hp) Rich-Burn Compressor Engine
Unit #02: 1986 Superior 8G-825 800-hp Rich-Burn Compressor Engine
Unit #03a: Cessco Triethylene Glycol (TEG) Dehydration Unit
Unit #03b: Cessco Still Vent
Unit #04: Kohler 48-hp, G-1600 White Emergency Generator
Unit #05: Weil-McLain PFG-7 Boiler #1
Unit #06: Weil-McLain PFG-7 Boiler #2
Unit #07: 1999 Superior 2408GTL 1,600-hp Lean-Burn Compressor Engine
Unit #09 Superior 400-hp Rich-Burn Compressor Engine
Unit #10a: Rushton Gas and Oil Equipment TEG Dehydration Unit
Unit #10b: Rushton Gas and Oil Equipment Still Vent

EnCana's Battle Creek Compressor Station compresses natural gas received from natural gas wells in the area. The design capacity of the facility is 20 million standard cubic feet per day (MMscf/day). The compressed gas is routed to a pipeline for delivery, sale, and use.

B. Source Description

EnCana owns and operates a natural gas compressor station and associated equipment located in the SW¼ of the SE¼ of Section 26, Township 36 North, Range 19 East, in Blaine County, Montana. The facility has two primary purposes. The first purpose is to boost the field gas up to the required pressure in the natural gas transmission system.

The second purpose of the complex is to "dry" the gas as it is being processed. The gas contains some moisture, which must be removed from the system prior to being sent into the transmission system. This is accomplished with a dehydrator, also commonly called a reboiler or glycol unit. The gas is treated with a glycol solution, which absorbs the water in the gas stream. The glycol is then heated to about 300 degrees Fahrenheit (°F) in order to drive off the water and return the glycol. The water that is driven off is released to the atmosphere in the form of steam. Burning natural gas in the dehydrator reboiler generates the heat necessary for this.

C. Permit History

Permit #3025-00 was issued to Xeno on November 29, 1998. The 1978 Superior compressor engine pre-dated the requirements for the Best Available Control Technology (BACT) rules; therefore, control equipment for BACT was not required. However, Xeno proposed to retrofit both Superior compressor engines with air-to-fuel ratio controllers and catalytic converters so the facility's potential emissions would stay below the Title V major source permitting threshold. Permit #3025-00 included limits on the 1986 and 1978 engines that enabled Xeno to become a synthetic minor source under the Title V Operating Permit Program.

On December 9, 1998, Xeno requested a modification to Permit #3025-00. The permit was modified to correct the maximum combustion rate and the emission factors used in calculating the Potential to Emit (PTE) for the Kohler G-1600 White Emergency Generator. The corrections were made in the emissions inventory section of the permit. On January 3, 1999, **Permit #3025-01** replaced Permit #3025-00.

In 1999, the U.S. Environmental Protection Agency (EPA) informed the Montana Department of Environmental Quality (Department) that any condition in an air quality preconstruction permit would be considered a federally enforceable condition. However, there are certain state rules that were never intended to be federally enforceable. The Department notified all facilities holding preconstruction permits that they could request deletion of those conditions based on Administrative Rules of Montana (ARM) 17.8.717 and ARM 17.8.315. Removing either of these conditions does not relieve the facility from the responsibility of complying with the rule upon which the permit condition was based; removal only ensures that enforcement of that condition remains solely with the Department. This permit action removed the condition based on ARM 17.8.315 from Xeno's permit. The Department also clarified the operational and reporting language for the Kohler emergency generator. Finally, the Department removed the condition for an initial compliance test for BETX because Xeno completed the BETX test. On June 21, 2000, **Permit #3025-02** replaced Permit #3025-01.

On October 17, 2000, Xeno submitted a complete permit application for the alteration of Permit #3025-02. Under this permit action, Xeno proposed to add a 1600-hp Superior 2408 GTL compressor engine, reduce the permitted emission limits applicable to the 1978 Superior 8G-825 compressor engine, replace the Weil-McLain EGH 125-P1 heater boiler with a Weil-McLain PFG-7 heater boiler, and update the permit to include still vent emissions from the Cessco dehydrator reboiler

The addition of the 1600-hp Superior 2408 GTL compressor engine and replacement of the Weil-McLain EGH 125-P1 heater boiler with a Weil-McLain PFG-7 heater boiler resulted in an increase in potential emissions of greater than 15 ton/yr. Therefore, the proposed changes required an air quality permit alteration. The proposed limit for the 1978 Superior 8G-825 compressor engine kept Xeno below the major source Title V operating permit threshold. Finally, the Department included still vent emissions from the Cessco dehydrator in the emission inventory, as requested, to ensure that all sources were included in the analysis of the permitted source. On November 25, 2000, **Permit #3025-03** replaced Permit #3025-02.

On January 11, 2001, the Department received a letter (including attachments) from Bison Engineering, Inc. (Bison), on behalf of Xeno, requesting an administrative modification and a de minimis change to Permit #3025-03. Xeno requested an administrative modification to correct the emissions inventory table to reflect the appropriate volatile organic compounds (VOC) and carbon monoxide (CO) emissions. The de minimis change incorporated the installation of an ALCO dehydrator unit. The Department agreed to modify the total emissions inventory table to reflect the appropriate VOC and CO emissions. In addition, based on the information submitted to the Department by Bison (which included an emission inventory of the dehydrator still vent and reboiler), emissions from the proposed dehydrator unit were less than the 15 tons per year de minimis threshold. The Department provided written notification on February 2, 2001, to Xeno that this action was de minimis and would not require a permit alteration prior to commencing with the project. The proposed dehydrator unit was included in Section III of the emission inventory. On August 15, 2001, **Permit #3025-04** replaced Permit #3025-03.

On September 4, 2001, the Department received an application from Bison, on behalf of Xeno requesting an alteration to Permit #3025-04. The application requested to add a Caterpillar 1,150-hp natural gas, two stroke, lean-burn compressor engine to the permit. In addition, the application also requested that a federally enforceable permit condition be established to keep emissions from Xeno's Battle Creek Compressor Station below the Title V permit threshold of 100 tons per year. Further, the application also requested that the permit alteration be written in a de minimis friendly manner. The 1,150-hp compressor engine was added to the permit, and the year of manufacture, make, model, and specific size of all the permitted equipment at the Battle Creek Compressor Station were removed from the permit to make the permit de minimis friendly. In addition, the emission limits for CO on Sources #1, #2, and #7 and the emission limit for nitrogen oxides (NO_X) on source #1 were reduced to keep Xeno's Battle Creek Compressor Station below the Title V permit threshhold. Because the permit is de minimis friendly and the emission limits established to keep Xeno below the Title V permit threshold are below BACT limits that would normally be applied, the testing schedule for the compressor engines was changed from an every 4-year basis to an every 2-year basis. Further, Unit #01 and Unit #02 were last tested on January 12, 1999; therefore, 2 years had already passed from the last test date. Consequently, a 6-month time frame was set to allow Xeno to start testing Unit #01 and Unit #02 on an every 2-year basis. **Permit #3025-05** replaced Permit #3025-04.

On January 16, 2002, the Department received a de minimis request letter (including attachments) from Bison, on behalf of Xeno. In the letter, Xeno requested to modify Permit #3025-05 to include a 200,000 British thermal unit (Btu) per hour Rushton Gas and Oil Equipment TEG dehydrator.

In addition, on January 31, 2002, the Department received an additional de minimis request letter (including attachments) from Bison, on behalf of Xeno. The letter requested to modify Permit #3025-05 to include a 306-hp diesel generator. Xeno also requested to limit the hours of operation to 720 hours per year to keep the facility's PTE below the Title V permit threshold.

Further, the Department received a third letter on February 4, 2002, from Bison on behalf of Xeno and PanCanadian Energy Resources, Inc. (PanCanadian). The letter requested to transfer Permit #3025-05 from Xeno to PanCanadian. The modification added the dehydrator and the generator to the permit according to the provisions of ARM 17.8.745(1)(r). In addition, the modification also transferred the permit from Xeno to PanCanadian. **Permit #3025-06** replaced Permit #3025-05.

On April 16, 2002, the Department received a de minimis notification letter from Bison, on behalf of PanCanadian. The letter informed the Department that the 1,150-hp Caterpillar G3516LE Lean-Burn Compressor Engine that was originally permitted as Unit #09 was replaced with a 400-hp Superior Rich-Burn Compressor Engine retrofitted with a Non-Selective Catalytic Reduction (NSCR) unit and an Air/Fuel Ratio (AFR) controller. In addition, on April 18, 2002, the Department received a letter from PanCanadian requesting a name change from PanCanadian to EnCana. The current permit action updated the permit analysis to reflect the de minimis change and changed the name on the permit from PanCanadian to EnCana. **Permit #3025-07** replaced Permit #3025-06.

D. Current Permit Action

On April 30, 2003, the Department received a letter from Aspen Consulting & Engineering, Inc., on behalf of EnCana requesting an administrative amendment to Permit #3025-07. Specifically EnCana requested the Department to:

- Remove Section II.C.5. of the permit requiring EnCana to annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b)

- Remove the language in Section II.A.1. of the permit that limits EnCana to the operation of not more than four natural compressor engines at any given time

- Remove the language in Section II.A.7. of the permit that limits EnCana to the operation of Unit #04 to 500 hours per year

- Remove the following sources from the Montana Air Quality Permit #3025-07

    - ALCO Dehydrator Reboiler (Unit #8a)
    - ALCO Dehydrator Still Vent (Unit #8b)
    - Cat 306-hp diesel generator (Unit #11)

On June 5, 2003, the Department received a letter from Aspen Consulting & Engineering, Inc., on behalf of EnCana requesting an administrative amendment to Permit #3025-07 to change the name on the permit from EnCana Energy Resources, Inc. to EnCana.

In the current permitting action, the Department determined that Section II.C.5. will remain in the permit because the potential to emit from the source is above 100 tons per year without the imposition of the voluntary emission limits. The Department determined that the language in Section II.A.1. will remain in the permit because it is this language that makes emissions reductions obtained through offsetting a federally enforceable permit condition which allows EnCana flexibility under ARM 17.8.745. The Department determined that the language in Section II.A.7. will be removed from the permit because the change will not increase the facility's potential emissions to over 100 tons for any single pollutant. Units #8a, #8b, and #11 will be removed from the permit because they have been physically removed from the facility. The current permitting action also changes the name on the permit from EnCana Energy Resources, Inc. to EnCana. The permit has been updated to reflect current permit language and rule references used by the Department. **Permit #3025-08** replaces Permit #3025-07.

E. Additional Information

Additional information, such as applicable rules and regulations, BACT/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the ARM and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete

copies of all applicable rules and regulations, or copies where appropriate.

A. ARM 17.8, Subchapter 1 - General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this subchapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment, (including instruments and sensing devices), and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

   EnCana shall comply with all requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 - Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.213 Ambient Air Quality Standard for Ozone
5. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
6. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
7. ARM 17.8.221 Ambient Air Quality Standard for Visibility
8. ARM 17.8.222 Ambient Air Quality Standard for Lead
9. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

EnCana must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 - Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged to an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate. (2) Under this rule, EnCana shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. EnCana will meet this limitation by burning pipeline-quality natural gas in the compressor engines, the emergency generator, and the dehydration unit reboiler(s).

6. ARM 17.8.324(3) Hydrocarbon Emissions--Petroleum Products. No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such a tank is equipped with a vapor loss control device as described in (1) of this rule, or is a pressure tank as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources. The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60.

   40 CFR 60, Subpart KKK Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants. Owners or operators of onshore natural gas processing plants, as defined and applied in 40 CFR Part 60, shall comply with standards and provisions of 40 CFR Part 60, Subpart KKK. This subpart does not apply to the EnCana facility because the facility does not meet the definition of a natural gas processing plant as defined in 40 CFR Part 60, Subpart KKK.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as listed below:

40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with the applicable provisions of 40 CFR Part 63, Subpart HH. In order for a natural gas production facility to be subject to 40 CFR Part 63, Subpart HH requirements, certain criteria must be met. First, the facility must be a major source of Hazardous Air Pollutants (HAP) as determined according to paragraphs (a)(1)(i) through (a)(1)(iii) of 40 CFR 63, Subpart HH. Second, a facility that is determined to be major for HAP must also either process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer, or process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. Third, the facility must also contain an affected source as specified in paragraphs (b)(1) through (b)(4) of 40 CFR Part 63, Subpart HH. Finally, if the first three criteria are met, and the exemptions contained in paragraphs (e)(1) and (e)(2) of 40 CFR Part 63, Subpart HH do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HH. Because the facility is not a major source of HAP, EnCana is not subject to the provisions of 40 CFR Part 63, Subpart HH.

40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In order for a natural gas transmission and storage facility to be subject to 40 CFR Part 63, Subpart HHH requirements, certain criteria must be met. First, the facility must transport or store natural gas prior to the gas entering the pipeline to a local distribution company or to a final end user if there is no local distribution company. In addition, the facility must be a major source of HAP as determined using the maximum natural gas throughput as calculated in either paragraphs (a)(1) and (a)(2) or paragraphs (a)(2) and (a)(3) of 40 CFR Part 63, Subpart HHH. Second, a facility must contain an affected source (glycol dehydration unit) as defined in paragraph (b) of 40 CFR Part 63, Subpart HHH. Finally, if the first two criteria are met, and the exemptions contained in paragraph (f) of 40 CFR Part 63, Subpart HHH, do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HHH. Because the facility is not a major source of HAP, EnCana is not subject to the provisions of 40 CFR 63, Subpart HHH.

D. ARM 17.8, Subchapter 5 - Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. EnCana was not required to submit a permit application fee because the change is considered administrative.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open

burning permit, issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

E. ARM 17.8, Subchapter 7 - Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this subchapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter or use any air contaminant sources that have the potential to emit greater than 25 tons per year of any pollutant. EnCana has the potential to emit more than 25 tons per year of NO_X and CO; therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permit--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that are not subject to the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. EnCana was not required to submit an application for the current permit action because the change is considered administrative.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT determination was not required for the current permit action because there are no new or altered sources permitted as a part of this action and because the change is considered administrative.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Statutes and Rules. This rule states that nothing in the permit shall be construed as relieving EnCana of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Public Review of Permit Applications. This rule requires that EnCana notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. EnCana was not required to publish an affidavit of publication of public notice for the current permit action because the change is considered administrative.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any

major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because it is not listed and it does not have the potential to emit more than 250 tons-per-year (excluding fugitive emissions) of any pollutant.

G. ARM 17.8, Subchapter 12 - Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one HAP, PTE > 25 tons/year of a combination of all HAP, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing air quality Permit #3025-08 for EnCana, the following conclusions were made:

   a. The facility's PTE is less than 100 tons/year for any pollutant.

   b. The facility's PTE is less than 10 tons/year for any single HAP and less than 25 tons/year for all HAP.

   c. This source is not located in a serious PM_{10} nonattainment area.

   d. This facility is not subject to any current NSPS.

   e. This facility is not subject to any current NESHAP.

   f. This source is not a Title IV affected source, nor a solid waste combustion unit.

   g. This source is not an EPA designated Title V source.

   EnCana's permit (#3025-08) contains federally enforceable conditions that limit the facility's potential emissions to a level below the Title V Operating Permit Program threshold. Therefore, a Title V operating permit is not required.

   h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations that limit that source's potential to emit.

      i. In applying for an exemption under this section, the owner or operator of the source shall certify to the Department that the source's potential to emit does not require the source to obtain an air quality operating permit.

ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

The Department determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by ARM 17.8.1204(3) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

III. BACT Determination

A BACT determination is required for each new or altered source. EnCana shall install on the new or altered source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT analysis is not required for the current permit action, because there are no new or altered sources permitted as a part of this action and because the change is considered administrative.

IV. Emission Inventory

Air Pollutants (tons/year)

#	Emission Units	PM_{10}	NO_x	CO	VOC	SO_x
01	800-hp Superior 8G-825 Compressor Engine	0.26	45.60	20.41	7.73	0.0164
02	800-hp Superior 8G-825 Compressor Engine	0.26	15.45	20.41	7.73	0.0164
03a	Cessco Dehydrator Reboiler	0.02	0.22	0.18	0.01	0.0013
03b	Cessco Dehydrator Still Vent	0.00	0.00	0.00	0.23	0.00
04	Kohler G-1600 White Emergency Generator	0.01	0.15	0.13	0.01	0.001
05	Weil-McLain EGH 125-P1 Boiler	0.01	0.17	0.14	0.01	0.0014
06	Weil-McLain PFG-7 Emergency Boiler	0.01	0.17	0.14	0.01	0.0014
07	1600-hp Superior 2408GTL Compressor Engine	0.004	20.09	34.60	15.45	0.027
09	400-hp Superior 3408TA Compressor Engine	0.51	5.78	7.67	5.78	0.0286
10a	Rushton Gas & Oil Equipment Dehydrator Reboiler	0.007	0.088	0.074	0.005	0.001
10b	Rushton Gas & Oil Equipment Dehydrator Still Vent	0.00	0.00	0.00	0.0197	0.00
Total Emissions		**1.09**	**87.72**	**83.75**	**36.99**	**0.10**

UNIT #01: 1978 Superior 8G-825 Compressor Engine

Brake Horsepower: 800 bhp
Hours of Operation: 8,760 hr/yr
Max Fuel Combustion Rate: 6.25 MMBtu/hr
Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu

PM_{10} Emissions
Emission Factor: 9.50 lb/MMSCF {FIRE, PC Version, 1/95, 2-02-002-02}
Calculations: 9.50 lb/MMSCF * 0.001 MMSCF/MMBtu * 6.25 MMBtu/hr = 0.06 lb/hr
0.06 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.26 ton/yr

NO_x Emissions
Emission factor: 5.90 g/bhp-hr {Requested by Company-based on testing results}

Calculations: 5.90 g/bhp-hr * 800 bhp * 0.002205 lb/g = 10.41 lb/hr
10.39 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 45.60 ton/yr

VOC Emissions
Emission factor: 1.00 g/bhp-hr {Engine Manufacturers Information}
Calculations: 1.00 g/bhp-hr * 800 bhp * 0.002205 lb/g = 1.76 lb/hr
1.76 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 7.73 ton/yr

CO Emissions
Emission factor: 2.64 g/bhp-hr {Requested by Company-based on testing results}
Calculations: 2.64 g/bhp-hr * 800 bhp * 0.002205 lb/g = 4.66 lb/hr
4.66 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 20.41 ton/yr

SO_x Emissions
Emission factor: 0.6000 lb/MMSCF {FIRE, PC Version, 1/95, 2-02-002-02}
Calculations: 0.6000 lb/MMSCF * 0.001 MMSCF/MMBtu * 6.25 MMBtu/hr = 0.0038 lb/hr
0.0038 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.0164 ton/yr

UNIT #02: 1986 Superior 8G-825 Compressor Engine

Brake Horsepower: 800 bhp
Hours of Operation: 8,760 hr/yr
Max Fuel Combustion Rate: 6.25 MMBtu/hr
Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu

PM_{10} Emissions
Emission Factor: 10.00 lb/MMSCF {FIRE, PC Version, 1/95, 2-02-002-02}
Calculations: 10.00 lb/MMSCF * 0.001 MMSCF/MMBtu * 6.25 MMBtu/hr = 0.06 lb/hr
0.06 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.26 ton/yr

NO_x Emissions
Emission factor: 2.00 g/bhp-hr {Manufacturer's Estimates}
Calculations: 2.00 g/bhp-hr * 800 bhp * 0.002205 lb/g = 3.53 lb/hr
3.53 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 15.45 ton/yr

VOC Emissions
Emission factor: 1.00 g/bhp-hr {Manufacturer's Estimates}
Calculations: 1.00 g/bhp-hr * 800 bhp * 0.002205 lb/gram = 1.76 lb/hr
1.76 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 7.73 ton/yr

CO Emissions
Emission factor: 2.64 g/bhp-hr {Requested by Company-based on testing results}
Calculations: 2.64 g/bhp-hr * 800 bhp * 0.002205 lb/g = 4.66 lb/hr
4.66 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 20.41 ton/yr

SO_x Emissions
Emission factor: 0.6000 lb/MMSCF {FIRE, PC Version, 1/95, 2-02-002-02}
Calculations: 0.6000 lb/MMSCF * 0.001 MMSCF/MMBtu * 6.25 MMBtu/hr = 0.0038 lb/hr
0.0038 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.0164 ton/yr

UNIT #03a: Cessco Dehydrator Reboiler

Max Fuel Combustion Rate: 0.50 MMBtu/hr
Hours of Operation: 8,760 hr/yr
Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu
Fuel Consumption: 0.50 * 0.001 MMScf/MMBtu *8760 hr/yr = 4.38 MMScf/yr

PM_{10} Emissions
Emission Factor: 7.60 lb/MMSCF {AP-42, Chapter 1, Table 1.4-2, 7/98}
Calculations: 7.60 lb/MMScf * 4.38 MMScf/yr * 0.0005 ton/lb = 0.017 ton/yr

NO_x Emissions
Emission Factor: 100.0 lb/MMSCF {AP-42, Chapter 1, Table 1.4-1, 7/98}
Calculations: 100.0 lb/MMScf * 4.38 MMScf/yr * 0.0005 ton/lb = 0.219 ton/yr

VOC Emissions
Emission Factor: 5.50 lb/MMSCF {AP-42, Chapter 1, Table 1.4-2, 7/98}
Calculations: 5.50 lb/MMScf * 4.38 MMScf/yr * 0.0005 ton/lb = 0.012 ton/yr

CO Emissions
Emission Factor: 84.0 lb/MMSCF {AP-42, Chapter 1, Table 1.4-1, 7/98}
Calculations: 84.0 lb/MMScf * 4.38 MMScf/yr * 0.0005 ton/lb = 0.184 ton/yr

SO_x Emissions
Emission Factor: 0.60 lb/MMSCF {AP-42, Chapter 1, Table 1.4-2, 7/98}
Calculations: 0.60 lb/MMScf * 4.38 MMScf/yr * 0.0005 ton/lb = 0.001 ton/yr

UNIT #03b: Cessco Dehydrator Still Vent

Hours of Operation: 8760 hr/yr

VOC Emissions

Emission Factor: 0.052 lb/hr (GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program)
Calculations: 0.052 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.228 ton/yr

UNIT #04: Kohler G-1600 White Emergency Generator

Hours of Operation: 8760 hr/yr
Max Fuel Combustion Rate: 0.342 MMBtu/hr
Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu
Fuel Consumption: 0.342 MMBtu/hr * 0.001 MMscf/MMBtu *8760 hr/yr = 3.00 MMScf/yr

PM_{10} Emissions
Emission Factor: 7.60 lb/MMSCF {AP-42 Chapter 1, Table 1.4-2, 7/98}
Calculations: 7.60 lb/MMSCF * 3.00 MMscf/yr * 0.0005 ton/lb = 0.01 ton/yr

NO_x Emissions
Emission factor: 100.0 lb/MMSCF {AP-42 Chapter 1, Table 1.4-1, 7/98}
Calculations: 100.0 lbs/MMSCF * 3.00 MMscf/yr * 0.0005 ton/lb = 0.15 ton/yr

VOC Emissions
Emission factor: 5.50 lb/MMSCF {AP-42 Chapter 1, Table 1.4-2, 7/98}
Calculations: 5.50 lb/MMSCF * 3.00 MMscf/yr * 0.0005 ton/lb = 0.01 ton/yr

CO Emissions
Emission factor: 84.0 lb/MMSCF {AP-42 Chapter 1, Table 1.4-1, 7/98}
Calculations: 84.0 lb/MMSCF * 3.00 MMscf/yr * 0.0005 ton/lb = 0.13 ton/yr

SO_x Emissions
Emission factor: 0.60 lb/MMSCF {FIRE, Version 6.1, 2-01-002-02}
Calculations: 0.60 lb/MMSCF * 3.00 MMscf/yr * 0.0005 ton/lb = 0.001 ton/yr

UNIT #05: Weil-McLain EGH 125-P1 Boiler

Max Fuel Combustion Rate: 0.39 MMBtu/hr
Hours of Operation: 8,760 hr/yr
Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu
Fuel Consumption: 0.39 MMBtu/hr * 0.001 MMScf/MMBtu *8760 hr/yr = 3.42 MMScf/yr

PM_{10} Emissions
Emission Factor: 7.60 lb/MMSCF {AP-42 Chapter 1, Table 1.4-2, 7/98}
Calculations: 7.60 lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.013 ton/yr

NO_x Emissions
Emission factor: 100.0 lb/MMSCF {AP-42 Chapter 1, Table 1.4-1, 7/98}
Calculations: 100.0 lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.171 ton/yr

VOC Emissions

Emission factor:	5.50	lb/MMSCF	{AP-42 Chapter 1, Table 1.4-2, 7/98}
Calculations:	5.50	lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.009 ton/yr	

CO Emissions

Emission factor:	84.0	lb/MMSCF	{AP-42 Chapter 1, Table 1.4-1, 7/98}
Calculations:	84.0	lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.143 ton/yr	

SO_x Emissions

Emission factor:	0.60	lb/MMSCF	{FIRE, Version 6.1, 2-01-002-02}
Calculations:	0.60	lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.001 ton/yr	

UNIT #06: Weil-McLain PFG-7 Emergency Boiler

Max Fuel Combustion Rate:	0.39	MMBtu/hr
Hours of Operation:	8,760	hr/yr
Fuel Heating Value:	1,000	Btu/SCF or 0.0010 MMSCF/MMBtu
Fuel Consumption:	0.39	MMBtu/hr * 0.001 MMScf/MMBtu *8760 hr/yr = 3.42 MMScf/yr

PM_{10} Emissions

Emission Factor:	7.60	lb/MMSCF	{AP-42 Chapter 1, Table 1.4-2, 7/98}
Calculations:	7.60	lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.013 ton/yr	

NO_x Emissions

Emission factor:	100.0	lb/MMSCF	{AP-42 Chapter 1, Table 1.4-1, 7/98}
Calculations:	100.0	lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.171 ton/yr	

VOC Emissions

Emission factor:	5.50	lb/MMSCF	{AP-42 Chapter 1, Table 1.4-2, 7/98}
Calculations:	5.50	lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.009 ton/yr	

CO Emissions

Emission factor:	84.0	lb/MMSCF	{AP-42 Chapter 1, Table 1.4-1, 7/98}
Calculations:	84.0	lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.143 ton/yr	

SO_x Emissions

Emission factor:	0.60	lb/MMSCF	{FIRE, Version 6.1, 2-01-002-02}
Calculations:	0.60	lb/MMSCF * 3.42 MMscf/yr * 0.0005 ton/lb = 0.001 ton/yr	

UNIT #07: 1999 Superior 2408GTL Compressor Engine

Brake Horsepower:	1600	bhp
Hours of Operation:	8,760	hr/yr
Max Fuel Combustion Rate:	11.04	MMBtu/hr
Fuel Heating Value:	1,000	Btu/SCF or 0.0010 MMSCF/MMBtu

PM_{10} Emissions

Emission Factor:	0.080	lb/MMSCF	{AP-42, Chapter 3, Table 3.2-2, 7/00}
Calculations:	0.080	lb/MMSCF * 0.001 MMSCF/MMBtu * 11.04 MMBtu/hr = 0.0009 lb/hr	
	0.001	lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.004 ton/yr	

NO_x Emissions

Emission factor:	1.30	g/bhp-hr	{Manufacturer's Estimates}
Calculations:	1.30	g/bhp-hr * 1600 bhp * 0.002205 lb/g = 4.59 lb/hr	
	4.59	lb/hr * 8760 hr/yr * 0.0005 ton/lb = 20.09 ton/yr	

VOC Emissions

Emission factor:	1.00	g/bhp-hr	{Manufacturer's Estimates}
Calculations:	1.00	g/bhp-hr * 1600 bhp * 0.002205 lb/g = 3.53 lb/hr	
	3.53	lb/hr * 8760 hr/yr * 0.0005 ton/lb = 15.45 ton/yr	

CO Emissions

Emission factor:	2.24	g/bhp-hr	{Requested by Company-based on testing results}
Calculations:	2.24	g/bhp-hr * 1600 bhp * 0.002205 lb/g = 7.90 lb/hr	
	7.90	lb/hr * 8760 hr/yr * 0.0005 ton/lb = 34.60 ton/yr	

SO_x Emissions
Emission factor: 0.5600 lb/MMSCF {AP-42, Chapter 3, Table 3.2-2, 7/00}
Calculations: 0.5600 lb/MMSCF * 0.001 MMSCF/MMBtu * 11.04 MMBtu/hr = 0.0062 lb/hr
0.0062 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.027 ton/yr

UNIT #09: Superior 3408TA Compressor Engine

Brake Horsepower: 400 bhp
Hours of Operation: 8,760 hr/yr
Max Fuel Combustion Rate: 11.68 MMBtu/hr
Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu

PM_{10} Emissions
Emission Factor: 10.0000 lb/MMSCF {AP-42, Chapter 3, Table 3.2-2, 7/00}
Calculations: 10.0000 lb/MMSCF * 0.001 MMSCF/MMBtu * 11.68 MMBtu/hr = 0.1168 lb/hr
0.1168 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.51 ton/yr

NO_x Emissions
Emission factor: 1.50 g/bhp-hr {Manufacturer's Estimates}
Calculations: 1.50 g/bhp-hr * 400 bhp * 0.002205 lb/g = 1.32 lb/hr
1.32 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 5.78 ton/yr

VOC Emissions
Emission factor: 0.58 g/bhp-hr {Manufacturer's Estimates}
Calculations: 0.58 g/bhp-hr * 400 bhp * 0.002205 lb/g = 0.51 lb/hr
0.51 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.23 ton/yr

CO Emissions
Emission factor: 1.98 g/bhp-hr {Manufacturer's Estimates}
Calculations: 1.98 g/bhp-hr * 400 bhp * 0.002205 lb/g = 1.75 lb/hr
1.75 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 7.67 ton/yr

SO_x Emissions
Emission factor: 0.5600 lb/MMSCF {AP-42, Chapter 3, Table 3.2-2, 7/00}
Calculations: 0.5600 lb/MMSCF * 0.001 MMSCF/MMBtu * 11.68 MMBtu/hr = 0.0065 lb/hr
0.0065 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.029 ton/yr

UNIT #10a: Rushton Gas and Oil Equipment Dehydrator Reboiler

Max Fuel Combustion Rate: 0.20 MMBtu/hr
Hours of Operation: 8,760 hr/yr
Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu
Fuel Consumption: 0.20 * 0.001 MMScf/MMBtu *8760 hr/yr = 1.75 MMScf/yr

PM_{10} Emissions
Emission Factor: 7.60 lb/MMSCF {AP-42, Chapter 1, Table 1.4-2, 7/98}
Calculations: 7.60 lb/MMScf * 1.75 MMScf/yr * 0.0005 ton/lb = 0.0067 ton/yr

NO_x Emissions
Emission Factor: 100.0 lb/MMSCF {AP-42, Chapter 1, Table 1.4-1, 7/98}
Calculations: 100.0 lb/MMScf * 1.75 MMScf/yr * 0.0005 ton/lb = 0.0875 ton/yr

VOC Emissions
Emission Factor: 5.50 lb/MMSCF {AP-42, Chapter 1, Table 1.4-2, 7/98}
Calculations: 5.50 lb/MMScf * 1.75 MMScf/yr * 0.0005 ton/lb = 0.0048 ton/yr

CO Emissions
Emission Factor: 84.0 lb/MMSCF {AP-42, Chapter 1, Table 1.4-1, 7/98}
Calculations: 84.0 lb/MMScf * 1.75 MMScf/yr * 0.0005 ton/lb = 0.0735 ton/yr

SO_x Emissions
Emission Factor: 0.60 lb/MMSCF {AP-42, Chapter 1, Table 1.4-2, 7/98}
Calculations: 0.60 lb/MMScf * 1.75 MMScf/yr * 0.0005 ton/lb = 0.0005 ton/yr

UNIT #10b: Rushton Gas and Oil Equipment Dehydrator Still Vent

Hours of Operation: 8760 hr/yr
VOC Emissions

Emission Factor: 0.0045 lb/hr (GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program)
Calculations: 0.0045 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.0197 ton/yr

V. Air Quality Impacts

The facility is located in the SW¼ of the SE¼ of Section 26, Township 36 North, Range 19 East in Blaine County, Montana. The air quality of this area is classified as either Better than National Standards or unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. In the view of the Department, the amount of controlled emissions from this facility will not cause an exceedance of any ambient air quality standard.

VI. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VII. Environmental Assessment

An environmental assessment is not required for the current permitting action because the change is considered administrative.

Analysis Prepared by: Chris Ames
Date: July 10, 2003